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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,384	07/14/2003	M. Scott Corson	060556	5434
23596 7590 09/16/2010 QUALCOMM INCORPORATED 5775 MOREHOUSE DR. SAN DIEGO, CA 92121				
EXAMINER RUTKOWSKI, JEFFREY M				
ART UNIT 2473		PAPER NUMBER		
NOTIFICATION DATE 09/16/2010		DELIVERY MODE ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

us-docketing@qualcomm.com

Office Action Summary

Application No.

10/619,384

Applicant(s)

CORSON ET AL.

Examiner

JEFFREY M. RUTKOWSKI

Art Unit

2473

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 June 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-14, 18-21, 25, 30, 33, 35, 39, 42 and 44-57 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-14, 18-21, 25, 30, 33, 35, 39, 42 and 44-57 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Final Drawing Review (PTO-849)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claims 6, 15-17, 22-24, 26-29, 31-32, 34, 36-38 and 43 have been cancelled.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 06/03/2010 has been entered.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. **Claims 48, 49 and 51** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The scope of the claimed “computer readable medium” is not limited to non-transitory embodiments because the specification defines the computer readable medium in an open-ended manner. For example, the claimed computer readable medium is something such as a memory device e.g., RAM, floppy disk, etc. (see page 23 lines 25-30). Since the scope of the claimed computer readable medium is open-ended and includes a number of things unspecified (etcetera), the Examiner asserts that the scope of the claimed computer readable medium also includes transitory signals. A transitory signal is a signal per se, which falls into a non-statutory subject matter.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. **Claims 1-5, 7-12, 14, 18, 25, 30, 33, 39, 40, 42, 44, 46-49, 52, and 53-57** are rejected under 35 U.S.C. 103(a) as being unpatentable over Lehtovirta et al. (US 2001/0034228) in view of Alriksson et al. (US Pg Pub 2001/0024443), hereinafter referred to as Alriksson, and Medard et al. (US Pat 6,047,331), hereinafter referred to as Medard.

7. For **claim 1, 39, 42, 46, 48, 52, 54**, Lehtovirta discloses *receiving a fault signal* (N_RESET) *indicating a network node fault* (the N_RESET message is used to indicate a partial fault in PS CN 20; see paragraph 0048 and figure 12); *determining if the network node fault* (partial fault) *corresponds to a network node* (a PS CN 20 node; see paragraph 0020 and figure 12) *that is used in routing signals* (RAB signals; see figure 12) *to or from the end node* (UE 30; see figure 12. The N_RESET message contains a list of IP addresses in the PS CN 20 that have failed; see paragraph 0048 and figure 12) *and initiating a fault response operation* (release

RABs) *if it is determined that the network node fault corresponds to a network node* (a PS CN **20** node; see paragraph 0020) *that is used in routing of signals to or from the end node* (UE **30**; a node that receives the N_RESET message, such as a UE or other core network nodes, releases all RABs associated with the IP address of the failed device; see paragraphs 0046-0048 and figure 12).

8. Lehtovirta discloses *determining if the network node fault* (partial fault) *corresponds to a network node* (a PS CN **20** node; see paragraph 0020 and figure 12) *that is used in routing signals* (RAB signals; see figure 12) *to or from the end node* (UE **30**; see figure 12. the N_RESET message contains a list of IP addresses in the PS CN **20** that have failed; see paragraph 0048 and figure 12). The nodes that receive the partial fault message include UE (see paragraph 0046). Lehtovirta also discloses each peer node in the network is aware allocated IP addresses for routing purposes (see paragraph 0047). Lehtovirta does not disclose the use of a list. Medard discloses *determining using said generated list* (routing table **16**), *if the network node fault corresponds to a network node that is used in routing signals to or from said end node* (Medard suggests this feature because the network nodes **12a** performs a routing table **16** look-up when a fault message is received; see col. 10 lines 6-40); *and initiating a fault response operation* (the network node **12a** uses a secondary path to send information; see col. 10 lines 19-41) *if it is determined that the network node fault corresponds to a network node that is used in routing of signals to or from said end node* (if there is a match in the routing table **16**; see col. 10 lines 6-40). It would have been obvious to a person of ordinary skill in the art at the time of the invention to use Medard's architecture in Lehtovirta's invention to provide a recovery mechanism at the source node (Medard, abstract).

9. Lehtovirta does not disclose the generation of Mobile Internet Protocol (IP) signals. Alriksson suggests *generating at the end node* (a node that is performing source routing, see paragraph 0109), *from Mobile IP signals directed to said end node or transmitted by said end node* (gateway capability messages are sent in Mobile IP signals are sent to the end node), *a list of network nodes identifying network nodes used in routing signals to or from said end node* (the information is used to populate a routing table on the source node, see paragraph 0105. Also, figure 3 shows there are two gateways that transmit the messages), *said Mobile IP signals including at least one of a Mobile IP agent solicitation message, a Mobile IP agent advertisement message* (Mobile IP agent advertisements are used to notify the source nodes of an Internet gateway(s) availability, see paragraph 0109), *a Mobile IP registration message and a Mobile IP registration reply message*. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use Alriksson's architecture in Lehtovirta's invention to allow an end node to determine the capabilities of certain nodes on the network (Alriksson, paragraph 0109).

10. Specifically for **claim 39**, Lehtovirta discloses *a means for receiving* (each UE **30** has antenna that receives information from the network), *and a means for initiating* (Lehtovirta suggests the means for initiating is a processor executing code because figure 13 shows the steps that are performed by nodes that receive the N_RESET message. The nodes that receive the N_RESET message include the UE; see paragraph 0046).

11. Lehtovirta does not disclose the use of *a means for storing or a means for processing*. Medard discloses *means for storing* (route table **16**; see figure 1) *and a means for processing* (APS processor **14**; see figure 1). It would have been obvious to a person of ordinary skill in the

art at the time of the invention to use Medard's architecture in Lehtovirta's invention to provide a recovery mechanism at the source node (Medard, abstract).

12. Lehtovirta does not disclose the use of a means for generating. Alriksson discloses *means for generating* (Alriksson suggests the means for generating is a processor executing code because protocol stack information is used to populate a routing table; see paragraphs 0105 and 0109). It would have been obvious to a person of ordinary skill in the art at the time of the invention to use Alriksson's architecture in Lehtovirta's invention to allow an end node to determine the capabilities of certain nodes on the network (Alriksson, paragraph 0109).

13. Specifically for **claims 46 and 54**, Lehtovirta discloses *a means for receiving* (each UE **30** has antenna that receives information from the network), *and a means for initiating* (Lehtovirta suggests the means for initiating is a processor executing code because figure 13 shows the steps that are performed by nodes that receive the N_RESET message. The nodes that receive the N_RESET message include the UE; see paragraph 0046).

14. Lehtovirta does not disclose the use of *a means for determining*. Medard discloses *a means for determining* (APS processor **14**; see figure 1). It would have been obvious to a person of ordinary skill in the art at the time of the invention to use Medard's architecture in Lehtovirta's invention to provide a recovery mechanism at the source node (Medard, abstract).

15. Lehtovirta does not disclose the use of a means for generating. Alriksson discloses *means for generating* (Alriksson suggests the means for generating is a processor executing code because protocol stack information is used to populate a routing table; see paragraphs 0105 and 0109). It would have been obvious to a person of ordinary skill in the art at the time of the

invention to use Alriksson's architecture in Lehtovirta's invention to allow an end node to determine the capabilities of certain nodes on the network (Alriksson, paragraph 0109).

16. Specifically for **claims 42 and 52**, Lehtovirta discloses *the use of a receiver* (each UE **30** has antenna that receives information from the network) *and a processor to receive service interference notifications* (Lehtovirta suggests the use of a processor because figure 13 shows the steps that are performed by nodes that receive the N_RESET message. The nodes that receive the N_RESET message include the UE; see paragraph 0046).

17. Lehtovirta does not disclose the use of *a memory for storing lists of nodes*. Medard discloses the use of *a memory for storing lists of nodes* (route table **16**; see figure 1). It would have been obvious to a person of ordinary skill in the art at the time of the invention to use Medard's architecture in Lehtovirta's invention to provide a recovery mechanism at the source node (Medard, abstract).

18. Lehtovirta does not disclose the use of a processor module configured to generate. Alriksson discloses the use of *a processor module configured to generate* (Alriksson suggests the use of a processor module because protocol stack information is used to populate a routing table; see paragraphs 0105 and 0109). It would have been obvious to a person of ordinary skill in the art at the time of the invention to use Alriksson's architecture in Lehtovirta's invention to allow an end node to determine the capabilities of certain nodes on the network (Alriksson, paragraph 0109).

19. For **claims 2, 47, 49 and 55**, Lehtovirta suggests *comparing network node information* (IP address of the failed device; see figure 12) *included in the received fault signal* (N_RESET message; see figure 12) *to information stored in memory identifying at least one network node*

used in routing signals to or from the end node (the nodes that receive the N_RESET message use the IP address information to shut down only those RABs that are associated with the IP address; see paragraphs 0046, 0048 and figure 12). Lehtovirta does not disclose the use of a *generated list*. Medard discloses the use of a *generated list* (routing table 16; see figure 1). It would have been obvious to a person of ordinary skill in the art at the time of the invention to store a routing table in memory in Lehtovirta's invention to provide a recovery mechanism at the source node (Medard, abstract).

20. Specifically for **claims 47 and 55**, Lehtovirta suggests the *means for comparing* is a processor executing code because figure 13 shows the steps that are performed by nodes that receive the N_RESET message.

21. For **claims 3 and 56**, Lehtovirta suggests *determining the fault response operation as a function of information stored in the end node* (the steps **138 and 140** are performed by nodes that receive the N_RESET message; see figure 13. The nodes that receive the N_RESET message include UE; see paragraph 0046), *the stored information relating to a plurality of possible operations* (all RABs are released and signaling connections can be maintained, if desired; see paragraph 0050 and figure 13 step **140**).

22. Specifically for **claim 56**, Lehtovirta suggests the *means for determining* is a processor executing code because figure 13 shows the steps that are performed by nodes that receive the N_RESET message.

23. For **claims 4, 25 and 57**, Lehtovirta discloses *initiating said fault response operation as a function of fault response information stored in said end node* (the steps **138 and 140** are performed by nodes that receive the N_RESET message; see figure 13. The nodes that receive

the N_RESET message include UE; see paragraph 0046), *said stored fault response information relating to a plurality of possible operations* (all RABs are released and signaling connections can be maintained, if desired; see paragraph 0050 and figure 13 step 140).

24. Lehtovirta does not disclose selecting operations based on the type of fault and the node where the fault occurred. Medard discloses *wherein said initiating said fault response operation is also performed as a function of the network node at which the fault occurred with said operation being elected from a plurality of possible operations based on both the type of fault* (link or node failure; see col. 10 lines 19-21) *and which one of a plurality of network nodes was the node at which the fault occurred* (the secondary path is selected based on the link and the node that failed; see col. 10 lines 19-41 and figure 1). It would have been obvious to a person of ordinary skill in the art at the time of the invention to use Medard's architecture in Lehtovirta's invention to provide a recovery mechanism at the source node (Medard, abstract).

25. Specifically for **claim 57**, Lehtovirta suggests the *means for initiating* is a processor executing code because figure 13 shows the steps that are performed by nodes that receive the N_RESET message.

26. For **claim 5**, Lehtovirta further teaches using a list of network nodes to determine if the node is used in the routing of signals to the end node (see paragraph 44).

27. For **claim 7**, Lehtovirta further teaches the stored information includes information identifying a network node which is used by the end node as an access node through the end node is coupled to other nodes in the communications network (see paragraph 46; The RNC coupled to the base station is used by the end node as an access node.).

28. For **claim 8**, Lehtovirta further teaches the access node is a base station and the end node is a mobile device that is coupled to the base station by a wireless communications link (see Fig. 1 Boxes 28 and 30).

29. For **claims 9 and 33**, Lehtovirta further teaches generating at least a portion of the stored information identifying the network nodes used in routing signals to or from the end node from information included in signals sent to or from the end node (see paragraph 44).

30. Lehtovirta does not disclose generating at least a portion of the stored information identifying the network nodes used in routing signals to or from the end node from information included in signals sent to or from the end node. Alriksson discloses dynamically generating at least a portion of the stored information identifying the network nodes used in routing signals to or from the end node from information included in signals sent to or from the end node (the routing table entries are dynamically generated using Mobile IP agent advertisements, see paragraph 0109). It would have been obvious to a person of ordinary skill in the art at the time of the invention to use Alriksson's architecture in Lehtovirta's invention to allow an end node to determine the capabilities of certain nodes on the network (Alriksson, paragraph 0109).

31. For **claim 10**, Lehtovirta teaches all the subject matter of the claimed invention with the exception of dynamically generating at least a portion of the stored information identifying network nodes includes: operating the end node to monitor for non-fault related signals and to generate at least some of the stored information from the monitored non-fault related signals.

32. However, Alriksson teaches dynamically generating at least a portion of the stored information identifying network nodes includes: operating the end node to monitor for non-fault related signals and to generate at least some of the stored information from the monitored non-

fault related signals (the source node monitors the network for Mobile IP agent advertisements. The information from the agent advertisements is used to populate a route table, see paragraphs 0105 and 0109). It would have been obvious to a person of ordinary skill in the art at the time of the invention to use Alriksson's architecture in Lehtovirta's invention to allow an end node to determine the capabilities of certain nodes on the network (Alriksson, paragraph 0109).

33. For **claim 11**, Lehtovirta further teaches session signaling messages communicated to or from the end node (see paragraph 49).

34. For **claim 12**, Lehtovirta further teaches the non-fault related signals are routing messages (see paragraph 10).

35. For **claim 14**, Lehtovirta discloses a fault response where a RAB and/or signaling connection should be released (end node state update operation) **[0045]**.

36. For **claim 18**, Lehtovirta further teaches receiving a fault signal at a first network node; and sending a network node fault signal to the end node in response to receiving a fault signal (see paragraph 44).

37. For **claim 40**, Lehtovirta suggests *said device includes a wireless transmitter; and wherein means for receiving includes a radio receiver circuit* (figure 1 shows an end node uses an antenna as a transceiver, which is an integrated transmitter and receiver).

38. For **claim 44**, Lehtovirta discloses *fault response actions to be taken to respond to faults at network nodes* (different actions are taken for partial and complete network failures, see paragraphs 0044-0045).

39. Lehtovirta does not disclose the generation of a list for routing IP packets. Alriksson discloses *generating the list used in routing of IP packets to said mobile node* (routing table

entries are generated to route Mobile IP packets, see paragraphs 0105 and 0109). It would have been obvious to a person of ordinary skill in the art at the time of the invention to use Alriksson's architecture in Lehtovirta's invention to allow an end node to determine the capabilities of certain nodes on the network (Alriksson, paragraph 0109).

40. For **claim 53**, Lehtovirta further teaches the device includes a wireless transmitter; and where means for receiving includes a radio receiver circuit (see Fig. 1 Box 30).

41. **Claim 13** is rejected under 35 U.S.C. 103(a) as being unpatentable over Lehtovirta in view of Medard, and Alriksson, as applied to **claim 1**, and further in view of Hippelainen et al. (US 2004/0081086).

42. For **claim 13**, the combination of Lehtovirta Medard and Alriksson discloses the use of Mobile IP (see Alriksson paragraph 0109). The combination of Lehtovirta Medard and Alriksson does not disclose the use of a Mobile IP registration operation in response to the fault. Hippelainen teaches releasing a resource link and a Mobile IP registration operation in response to the fault (see paragraph 5). Thus, it would have been obvious to one of ordinary skill in the art to use the system of Hippelainen in the system of Lehtovirta. The motivation for doing so is to make the system more reliable.

43. **Claims 19-21 and 41** are rejected under 35 U.S.C. 103(a) as being unpatentable over Lehtovirta in view of Alriksson and Medard as applied to **claim 18** above, and further in view of Shah (US 5,390,326).

44. For **claims 19-21 and 41**, Lehtovirta teaches sending signals to a plurality of end nodes using internet protocol (see paragraphs 0046-0048 and figure 12). Lehtovirta in view of Alriksson and Medard teaches all the subject matter of the claimed invention with the exception

of periodically sending fault signals to a plurality of end nodes at preselected time intervals and monitoring for fault signals at preselected time intervals.

45. However, Shah teaches periodically sending fault signals to a plurality of end nodes at preselected time intervals (see col. 4 lines 44-46 and 53-59); and operating at least some of the plurality of end nodes to monitor for fault signals at the preselected time intervals but not between the preselected time intervals (see col. 4 lines 44-46). Thus, it would have been obvious to one of ordinary skill in the art to use the system of Shah in the system of Lehtovirta. The motivation for doing so is to allow the nodes only have to monitor for fault signals at the time intervals selected, which allows the nodes to reduce processing power previously spent on constantly monitoring for fault signals.

46. **Claim 30** is rejected under 35 U.S.C. 103(a) as being unpatentable over Lehtovirta in view of Medard and Alriksson as applied to **claim 25** above, and further in view of Khalil et al. (US Pat 6,578,085), hereinafter referred to as Khalil.

47. For **claim 30**, Lehtovirta further teaches where the stored information includes information identifying a network node, in the list of network nodes, which is used by the end node (see paragraph 44). The combination of Lehtovirta, Alriksson and Medard does not disclose the node being used by the end node as at least one of a Mobile IP home agent, a SIP proxy server, and a SIP location registrar.

48. However, Khalil teaches the node being at least one of a Mobile IP home agent, a SIP proxy server, and a SIP location registrar (see col. 5 lines 33-42). Thus, it would have been obvious to one of ordinary skill in the art to use the system of Khalil in the system of Lehtovirta.

The motivation for doing so is to generate the list as mobiles register so that is no delay when the list needs to be accessed.

49. **Claim 35** is rejected under 35 U.S.C. 103(a) as being unpatentable over Lehtovirta (US 2001/0034228) in view of Medard and Ariksson, as applied to **claim 25**, and further in view of and Shah (US 5,930,326).

50. For **claim 35**, Lehtovirta teaches sending signals to a plurality of end nodes (see paragraphs 44 and 45). Lehtovirta does not disclose periodically sending fault signals to a plurality of end nodes at preselected time intervals and monitoring for fault signals at preselected time intervals.

51. However, Shah teaches periodically sending fault signals to a plurality of end nodes at preselected time intervals (see col. 4 lines 44-46 and 53-59); and operating at least some of the plurality of end nodes to monitor for fault signals at the preselected time intervals but not between the preselected time intervals (see col. 4 lines 44-46). Thus, it would have been obvious to one of ordinary skill in the art to use the system of Shah in the system of Lehtovirta in view of Khalil. The motivation for doing so is to allow the nodes only have to monitor for fault signals at the time intervals selected, which allows the nodes to reduce processing power previously spent on constantly monitoring for fault signals.

52. **Claim 45** is rejected under 35 U.S.C. 103(a) as being unpatentable over Lehtovirta et al. (US 2001/0034228) in view of Ariksson and Medard, as applied to **claim 44** above, and further in view of Hippelainen et al. (US 2004/0081086).

53. For **claim 45**, Lehtovirta does not disclose the use of a Mobile IP registration operation in response to the fault. However, Hippelainen teaches releasing a resource link and a Mobile IP

registration operation in response to the fault (see paragraph 5). Thus, it would have been obvious to one of ordinary skill in the art to use the system of Hippelainen in the system of Lehtovirta to make the system more reliable.

54. **Claims 50 and 51** are rejected under 35 U.S.C. 103(a) as being unpatentable over Lehtovirta in view of Medard.

55. For **claims 50 and 51**, Lehtovirta discloses *receiving a fault signal (N_RESET) indicating a network node fault* (the N_RESET message is used to indicate a partial fault in PS CN 20; see paragraph 0048 and figure 12); *determining if the network node fault (partial fault) corresponds to a network node* (a PS CN 20 node; see paragraph 0020 and figure 12) *that is used in routing signals* (RAB signals; see figure 12) *to or from the end node* (UE 30; see figure 12). The N_RESET message contains a list of IP addresses in the PS CN 20 that have failed; see paragraph 0048 and figure 12) *and initiating a fault response operation* (release RABs) *if it is determined that the network node fault corresponds to a network node* (a PS CN 20 node; see paragraph 0020) *that is used in routing of signals to or from the end node* (UE 30; a node that receives the N_RESET message, such as a UE or other core network nodes, releases all RABs associated with the IP address of the failed device; see paragraphs 0046-0048 and figure 12). Lehtovirta further teaches comparing network node information included in the received fault signal to information in the generated list identifying at least one network node used in routing signals to or from the end node (see paragraphs 44 and 45).

56. Lehtovirta discloses *determining if the network node fault (partial fault) corresponds to a network node* (a PS CN 20 node; see paragraph 0020 and figure 12) *that is used in routing signals* (RAB signals; see figure 12) *to or from the end node* (UE 30; see figure 12. the

N_RESET message contains a list of IP addresses in the PS CN 20 that have failed; see paragraph 0048 and figure 12). The nodes that receive the partial fault message include UE (see paragraph 0046). Lehtovirta also discloses each peer node in the network is aware allocated IP addresses for routing purposes (see paragraph 0047). Lehtovirta does not disclose the use of a list. Medard discloses *determining using said generated list* (routing table 16), *if the network node fault corresponds to a network node that is used in routing signals to or from said end node* (Medard suggests this feature because the network nodes 12a performs a routing table 16 look-up when a fault message is received; see col. 10 lines 6-40); *and initiating a fault response operation* (the network node 12a uses a secondary path to send information; see col. 10 lines 19-41) *if it is determined that the network node fault corresponds to a network node that is used in routing of signals to or from said end node* (if there is a match in the routing table 16; see col. 10 lines 6-40). It would have been obvious to a person of ordinary skill in the art at the time of the invention to use Medard's architecture in Lehtovirta's invention to provide a recovery mechanism at the source node (Medard, abstract).

57. The fault messages in Lehtovirta's invention are distributed among network nodes. Lehtovirta does not disclose the UEs (end nodes) receive a fault signal or perform a recovery operation. Medard discloses *initiating said fault response operation as a function of fault response information stored in said end node prior to receiving* (the routing table 16 stores re-routing information; see col. 10 lines 39-40), *said stored fault response information relating to a plurality of possible operations* (a plurality of possible secondary paths; see col. 10 lines 5-20); *wherein said initiating said fault response operation is also performed as a function of the network node at which the fault occurred with said operation being elected from a plurality of*

possible operations based on both the type of fault (link or node failure; see col. 10 lines 19-21) and which one of a plurality of network nodes was the node at which the fault occurred (the secondary path is selected based on the link and the node that failed; see col. 10 lines 19-41 and figure 1). It would have been obvious to a person of ordinary skill in the art at the time of the invention to use Medard's architecture in Lehtovirta's invention to provide a recovery mechanism at the source node (Medard, abstract).

58. Specifically for **claim 50**, Lehtovirta discloses *a means for receiving* (each UE **30** has antenna that receives information from the network), *and a means for initiating* (Lehtovirta suggests the means for initiating is a processor executing code because figure 13 shows the steps that are performed by nodes that receive the N_RESET message. The nodes that receive the N_RESET message include the UE; see paragraph 0046). Lehtovirta suggests the *means for comparing* is a processor executing code because figure 13 shows the steps that are performed by nodes that receive the N_RESET message.

59. Lehtovirta does not disclose the use of *a means for determining*. Medard discloses *a means for determining* (APS processor **14**; see figure 1). It would have been obvious to a person of ordinary skill in the art at the time of the invention to use Medard's architecture in Lehtovirta's invention to provide a recovery mechanism at the source node (Medard, abstract).

Response to Arguments

60. The arguments with respect to Medard not disclosing receiving a fault signal indicating a network fault are moot. Lehtovirta discloses that network nodes, including UE and core network nodes, receive a N_RESET message (paragraph 0046). The N_RESET message is used to indicate faults in nodes on the network (figure 12).

61. The arguments with respect to Medard's routing table not being used to determine if the fault corresponds to a network node are not persuasive. Medard suggests this feature because in response to a signal indicating that a node in the network has failed, information concerning the nodes, links and preferred paths among the nodes is accessed from the routing table (see col. 10 lines 19-25). The phrase "preferred path" is a reference to both primary and secondary paths because the preferred paths are computed first, then stored hierarchically in routing table **16** in primary and secondary order (see col. 10 lines 5-15). Medard suggests that a determination is made that the failed node is part of the primary path (i.e. active path) because a secondary path is selected such that the failed node is no longer in the path between a source and a destination (see col. 10 lines 19-40 and figure 1).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFREY M. RUTKOWSKI whose telephone number is (571)270-1215. The examiner can normally be reached on Monday - Friday 7:30-5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kwang Yao can be reached on (571) 272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Jeffrey M Rutkowski/
Examiner, Art Unit 2473